USDA, National Agricultural Statistics Service

Indiana Crop & Weather Report

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CROP REPORT FOR WEEK ENDING APRIL 29

AGRICULTURAL SUMMARY

Farmers made good progress planting corn early in the week until rain halted most field activities, according to the Indiana Field Office of USDA's National Agricultural Statistics Service. Farmers continue to destroy damaged fields of winter wheat in order to plant corn. Planting of corn is 9 days behind the average pace and 5 days behind last year. Planting of soybeans is 7 days behind the average pace and 3 days behind last year.

FIELD CROPS REPORT

There were 2.9 **days suitable for field work**. Thirteen percent of the intended **corn** acreage has been **planted** compared with 30 percent last year and 34 percent for the 5-year average. By area, 11 percent has been planted in the north, 14 percent the central region, and 17 percent in the south. Two percent of the intended **soybean** acreage has been **planted** compared with 4 percent last year and 8 percent for the 5-year average.

Sixty percent of the **winter wheat** acreage is **jointed** compared with 73 percent for last year and 76 percent for the 5-year average. Winter wheat **condition** is rated 34 percent good to excellent compared to 80 percent last year at this time.

Major activities during the week included: inspecting wheat fields, spraying, soil preparation, applying anhydrous ammonia, preparing planting equipment, hauling grain to market, hauling manure and taking care of livestock.

LIVESTOCK, PASTURE AND RANGE REPORT

Pasture condition is rated 8% excellent, 47% good, 34% fair, 10% poor, and 1% very poor. Livestock are reported to be in mostly good condition. Pastures have improved as the warmer temperatures have prevailed over the last week.

CROP PROGRESS TABLE

Crop	This Week	Last Week	Last Year	5-Year Avg
	Percent			
Corn Planted	13	4	30	34
Soybeans Planted	2	NA	4	8
Winter Wheat Jointed	60	46	73	76

CROP CONDITION TABLE

Crop	Very Poor	Poor	Fair	Good	Excel-lent
	Percent				
Pasture	1	10	34	47	8
Winter Wheat 2007	8	18	40	31	3
Winter Wheat 2006	0	3	17	61	19

SOIL MOISTURE & DAYS SUITABLE FOR FIELDWORK TABLE

	This Week	Last Week	Last Year
	Percent		
Topsoil			
Very Short	0	0	0
Short	0	0	4
Adequate	54	71	66
Surplus	46	29	30
Subsoil			
Very Short	0	0	1
Short	0	1	7
Adequate	67	71	72
Surplus	33	28	20
Days Suitable	2.9	3.4	4.1

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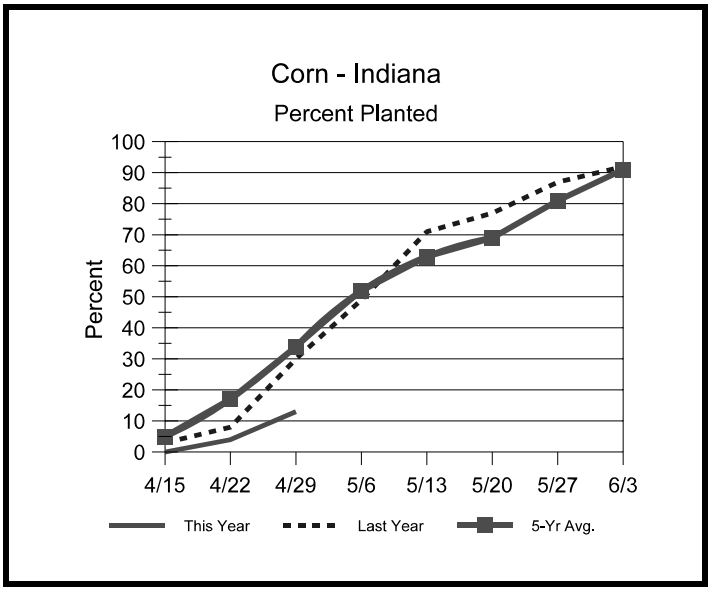
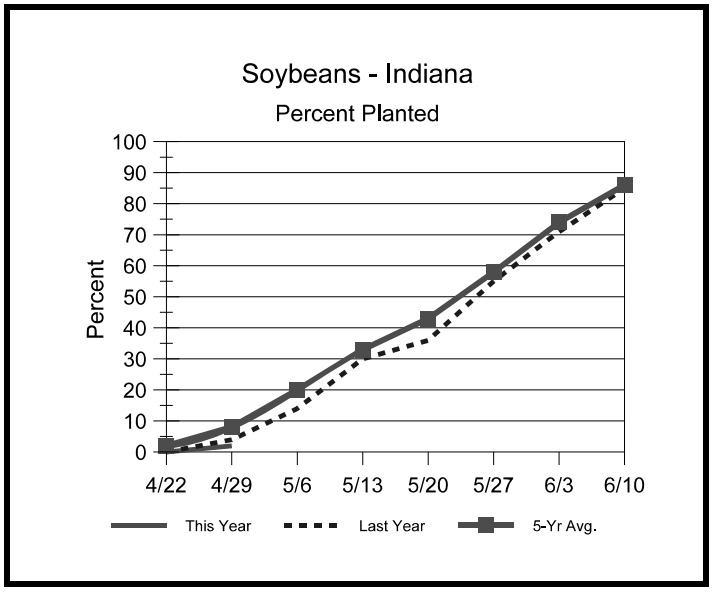
http://www.nass.usda.gov/Statistics_by_State/Indiana/

Crop Progress





Other Agricultural Comments And News

The Emergence Process in Corn

Successful germination alone does not guarantee successful emergence of a corn crop. The coleoptile must reach the soil surface before its internal leaves emerge from the protective tissue of the coleoptile. Growth stage VE refers to emergence of the coleoptile or first leaves through the soil surface (Ritchie et al., 1992).

As with all of corn growth and development, germination and emergence are dependent on temperature, especially soil temperature. Corn typically requires from 100 to 120 GDD (growing degree days) to emerge (Nielsen, 2007b; Nielsen, 2007c). Under warm soil conditions, the calendar time from planting to emergence can be as little as 5 to 7 days. Under cold soil conditions, emergence can easily take up to four weeks.

Elongation of the **mesocotyl** elevates the coleoptile towards the soil surface. The mesocotyl is the tubular, white, stemlike tissue connecting the seed and the base of the coleoptile. Technically, the mesocotyl is the first internode of the stem.

> **Useful Tip:** Physiologically, mesocotyls have the capability to lengthen from at least a 6-inch planting depth. Realistically, corn can be planted at least three inches deep if necessary to reach adequate moisture.

As the coleoptile nears the soil surface, exposure of the mesocotyl to the red light portion of the solar radiation spectrum halts mesocotyl elongation. Continued expansion of the leaves inside the coleoptile ruptures the coleoptile tip, allowing the first true leaf to emerge above the soil surface. Since the depth at which the mesocotyl senses red light is fairly constant, the resulting depth of the crown (base) of the coleoptile is nearly the same (1/2 to 3/4 inch) at seeding depths of one-inch or greater.

> **Useful Tip:** When corn is seeded very shallow (less than about 1/2 inch), the crown of the coleoptile will naturally be closer to the soil surface if not right at the surface. Subsequent development of the nodal root system can be restricted by exposure to high temperatures and dry surface soils.

Troubleshooting Considerations

Several factors can cause the coleoptile to split prematurely, allowing the leaves to emerge underground. Usually, more than one of the following factors are present when this problem occurs, making it difficult to place the blame on any one factor.

Exposure to light at deeper soil depths than usual due to cloddy seedbeds, dry seedbeds, sandy soils, or open slots in no-till.

Injury from certain herbicides, particularly under stressful environmental conditions. Symptoms include corkscrewed coleoptile, swollen mesocotyl and true leaves emerged from side of coleoptile.

Surface crusting, cloddy seedbeds, rocky seedbeds, planter furrow compaction, or otherwise dense surface soil that physically restrict mesocotyl elongation and coleoptile penetration. The pressure of the expanding leaves within the coleoptile eventually ruptures the side of the coleoptile. Symptoms include corkscrewed coleoptile, swollen mesocotyl and true leaves emerged from side of coleoptile. Note the similarity to those symptoms from herbicide injury.

Cold temperature injury, either from exposure to long periods of soil temperatures around 50°F or from exposure to wide daily swings (25 to 30F) in soil temperatures. Symptoms include absence of emerged coleoptile, corkscrewed mesocotyl or coleoptile and true leaves emerged from side of coleoptile. Note the similarity to those symptoms from herbicide injury.

> **Useful Tip:** The mesocotyl should remain firm, white and healthy through at least the 6-leaf stage, if not longer. If it is mushy, discolored, or damaged prior to this stage, then it is likely part of the crop problem being investigated.

In order to view the listing of “Related References” for this article, go to: URL: http://www.kingcorn.org/news/timeless/Emergence.html, page 3.

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(Additional Article on Page 4)

Weather Information Table

Week ending Sunday April 29, 2007

Station	Past Week Weather Summary Data							Accumulation April 1, 2007 thru April 29, 2007				
	Air Temperature				Precip.		Avg 4 in Soil Temp	Precipitation			GDD Base 50ºF	
	Hi	Lo	Avg	DFN	Total	Days		Total	DFN	Days	Total	DFN
Northwest (1)												
Chalmers_5W	81	41	57	+2	2.06	3		4.20	+0.70	10	95	-14
Francesville	80	39	57	+4	2.50	4		4.24	+0.68	10	87	+5
Valparaiso_AP_I	82	39	57	+5	2.21	3		2.91	-0.92	6	98	+21
Wanatah	82	38	56	+5	3.63	4	59	5.07	+1.38	9	76	+17
Winamac	81	41	57	+5	2.30	4	55	4.18	+0.62	9	88	+6
North Central(2)												
Plymouth	82	40	56	+3	2.29	4		5.06	+1.32	12	83	-7
South_Bend	82	37	57	+5	3.04	4		4.58	+0.87	11	102	+34
Young_America	80	42	58	+5	1.48	3		3.19	-0.16	8	111	+32
Northeast (3)												
Columbia_City	80	43	57	+6	1.92	3	51	3.28	-0.22	8	86	+30
Fort_Wayne	81	46	59	+6	1.57	5		3.56	+0.29	13	112	+39
West Central(4)												
Greencastle	80	43	61	+5	1.08	4		4.15	+0.57	10	125	+0
Perrysville	82	47	62	+8	0.99	3	61	3.53	-0.21	10	150	+49
Spencer_Ag	81	43	61	+7	1.99	4		4.95	+1.09	10	133	+26
Terre_Haute_AFB	81	44	64	+9	1.68	3		4.16	+0.41	9	166	+40
W_Lafayette_6NW	81	42	58	+5	1.87	4	61	4.26	+0.68	12	110	+27
Central (5)												
Eagle_Creek_AP	79	50	63	+8	0.70	4		4.24	+0.67	13	161	+45
Greenfield	80	46	61	+7	1.75	5		5.22	+1.34	17	134	+40
Indianapolis_AP	79	48	63	+8	0.88	4		3.80	+0.23	13	162	+46
Indianapolis_SE	80	47	61	+6	1.72	5		5.44	+1.83	14	133	+27
Tipton_Ag	79	46	58	+6	1.27	4	61	3.52	-0.24	11	103	+37
East Central(6)												
Farmland	79	45	58	+6	2.09	5	56	4.59	+1.14	11	97	+36
New_Castle	79	47	60	+8	2.31	4		5.37	+1.44	10	121	+56
Southwest (7)												
Evansville	82	48	67	+9	0.52	4		3.62	-0.25	10	220	+23
Freelandville	80	49	64	+8	0.96	3		2.84	-0.88	9	181	+39
Shoals	82	43	63	+7	0.75	4		5.12	+1.17	10	164	+24
Stendal	85	51	66	+9	0.80	5		4.67	+0.39	11	233	+67
Vincennes_5NE	83	49	66	+9	0.98	3	64	3.19	-0.53	9	188	+46
South Central(8)												
Leavenworth	82	49	65	+9	1.18	4		5.48	+1.05	10	194	+49
Oolitic	81	45	63	+8	1.53	5	61	4.79	+0.93	11	151	+31
Tell_City	82	53	66	+8	1.60	5		4.60	-0.05	11	215	+39
Southeast (9)												
Brookville	81	42	63	+9	1.23	5		3.63	-0.06	11	168	+79
Greensburg	80	47	63	+8	1.89	5		4.95	+1.03	13	170	+62
Scottsburg	82	45	64	+8	2.11	4		6.09	+2.05	11	184	+42

DFN = Departure From Normal (Using 1961-90 Normals Period).
GDD = Growing Degree Days.
Precipitation (Rainfall or melted snow/ice) in inches.
Precipitation Days = Days with precip of .01 inch or more.
Air Temperatures in Degrees Fahrenheit.

The above weather information is provided by AWIS, Inc.
For detailed ag weather forecasts and data visit the AWIS home page at
ww.awis.com

Aphids in Freeze-Damaged Wheat

- Aphids observed in some Indiana wheat.
- Virus transmission by aphids occurs mainly in the fall.
- Watch for aphids accumulating on wheat heads later in spring.

While out inspecting freeze-damaged wheat, some have noticed aphids on the sickly looking plants. Actually, the presence of aphids is common every spring but more people are out looking this year. Though the wheat may be stressed from freeze damage, scattered aphids feeding contribute little, if anything, to yield losses. In addition, aphids at this time aren't likely to infect and spread Barley Yellow Dwarf Virus (BYDV). Plants infested with aphids in the fall are more likely to be infected with BYDV and possibly severely damaged. Insecticide applications applied after wheat reaches Feekes growth stage 4.0 does little good to prevent the transmission of BYD (refer to "Feekes Growth Stages for Wheat" in *Pest & Crop*, #3, April 13, 2007). In short, there is little justification to treat aphids at this time.

However, aphid populations may increase as wheat heads begin to emerge and fill. The aphids can injure developing heads by sucking plant juices. An average of 50 or more aphids per head indicates that an insecticide treatment should be considered. Normally when aphid numbers build to 10 or more per plant, aphid predators and parasites increase rapidly in response to this food source. Lady beetles (adults and larvae), syrphid fly larvae, lacewing larvae, and several species of parasites will soon be scouring fields for aphids. In Indiana, because of a reduced virus threat and the natural enemies, the necessity to treat for aphids in the spring is rare.

In order to view the listing of "Related References" for this article, go to: http://www.entm.purdue.edu/extension/pestcrop/2007/issue3/index.html

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